d.) Remarks.

No claims have been amended, and currently claims 23-49, 52-54, and 76-122 are pending.

Request to Withdraw Finality of the Office Action

Applicant requests that the finality of the June 20, 2006, Office Action be removed, and that it be considered non-final.

As was agreed during the interview with Examiner Yoon on January 31, 2006, Applicant would respond to the then pending non-final Office Action and introduce an amendment limiting the claims to a dB enhancement "provided" that the Examiner would not issue a final Office Action (see page 15 of "Amendment and Response after Non-Final" submitted by Applicant on April 13, 2006). Applicant explained that such an amendment was not necessary, but Examiner Yoon stated that, even if he disagreed with such an amendment, he would not place the Applicant under finality should another Office Action be issued. The discussed amendment was introduced instead of further argument in Applicant's response dated April 13, 2006 in expectation of receipt of either a Notice of Allowance or a Non-Final Office Action. However, the Examiner has made this current Office Action final. An agreement on whether to make an Office Action final is well within the Examiner's authority. As such, this Office Action should not have been made final and the Examiner should be held to statements made during the Interview.

Applicant respectfully requests that the finality of the instant Office Action be withdrawn in accordance with the Examiner's statement during the interview. Only in this way is Applicant granted a full and fair opportunity to respond.

Remarks Regarding 35 U.S.C. § 112, First Paragraph

Claims 23-49, 52-54 and 76-122 stand rejected under 35 U.S.C. § 112, first paragraph, for allegedly containing subject matter which was not described in the specification. Applicant respectfully traverses.

The examiner alleges that the newly recited "an enhancement of at least 5 dB" does not have support in the specification. Applicant respectfully disagrees.

The limitation to 5 dB is found in the specification at Table 1, as was stated in Applicant's prior Response (filed and dated April 13, 2006) and as was also discussed at the Interview of January 31, 2006. During the Interview, Mr. Glatkowski noted to Examiner Yoon that shielding effectiveness generally increased in the CNT product as compared to Neat PET and also as the elongation increased between the CNT products. In fact, Mr. Glatkowski specifically stated that shielding effectiveness can be very small and noted that, comparing a 6:1 elongation product at 20 kHz (114 dB effectiveness) with a 6:1 elongation sample product at 15 MHz (116 dB effectiveness) produces a 2 dB increase in shielding effectiveness. Examiner Yoon stated that an effectiveness of 2 dB was small so as to be possible be within the statistical range of the inventor's analysis. In the specification, Applicant does state that experimental error calculations, which used partial derivatives and least squares methods was at not more than 6% for each measurement (see Specification, sentence spanning pages 10-11). According to Examiner Yoon, a 6% differential for each number result might be insufficient to show effectiveness. After further discussion it was tentatively agreed that at least a 5 dB effectiveness would be sufficient to show effectiveness and that Applicant would provide the Examiner with specific support in a response. Accordingly, and in Applicant's prior response, the claims were amended to recite that shielding effectiveness was at least 5 dB and Applicant noted that support can be found at least in Table 1.

Nevertheless, solely in an effort to advance prosecution, Applicant specifically notes that, comparing the 6:1 elongation product at 20kHz (114 dB effectiveness) with the 6:1 product at 1.5 GHz (119 dB effectiveness) produces the 5 dB shielding effectiveness. This is specific and exact literal support for the claimed amendments. No further support is required and the amendments made in the Response filed and dated April 13, 2006 do not constitute new matter. In addition, Applicant notes that the inventors specifically disclose that shielding effectiveness (in dB) of sample product at 1.5 wt% nanotubes is from 28 to 184 dB as compared to shielding effectiveness (in dB) of Neat PET which is from 17 to 34 dB. These ranges and combinations of numbers result to specifically support the recitation in the claims of at least 5 dB, at least 20 dB, at least 50 dB, at least 100 dB, and at least 150 dB.

The examiner further alleges that the limitation recited in claim 42 does not have support at page 13 of the specification. Applicant respectfully disagrees. This claim is

directed to electromagnetic shielding enhancement achieved by subjecting carbon nanotubes to "shearing which disentangles and/or aligns said nanotubes" (page 13). In other words, as enhancement is the objective, and this objective is achieved via, at least, shearing, the enhanced composite must be compared to the non-enhanced, pre-shearing composite. As the pre-shearing composite has not yet benefited from disentangling and/or aligning procedures, its carbon nanotubes are not aligned or oriented to provide electromagnetic shielding, as recited in claim 42. In fact, on page 10 of the specification, it is stated that the nanotubes, before undergoing a shearing procedure, "are agglomerates and exist as curved, intertwined entanglements, somewhat like steel wool pads." Therefore, support for this claim exists on at least pages 10 and 13 of the specification. Accordingly, this aspect of the rejection should be withdrawn.

For at least these reasons, Applicant respectfully requests that the rejection of claims 23-49, 52-54 and 76-122, under 35 U.S.C. § 112, first paragraph, be withdrawn as in error.

Remarks Regarding Judicially-Created Doctrine of Double Patenting

Claims 23-49, 52-54 and 76-122 stand rejected, under the judicially-created doctrine of obviousness-type double patenting, over claims 1-14 of U.S. Patent No. 6,265,466 (the "466 Patent"). The instant application is a continuation of the 466 Patent and, therefore, a properly worded Terminal Disclaimer would overcome this rejection. However, a properly worded Terminal Disclaimer was filed on March 24, 2003, and subsequently accepted by the PTO. Thus, this rejection is improper, and Applicant respectfully requests withdrawal of this rejection.

Remarks regarding 35 U.S.C. § 102(e) and alternative § 103(a)

Claims 23-49, 52-54, 76-104 and 108-122 stand rejected, under 35 U.S.C. § 102(e), as allegedly anticipated by or, in the alternative, under 35 U.S.C. § 103(a), as allegedly obvious over Smalley et al. (US 6,683,783; hereinafter "Smalley"). Applicant respectfully traverses this rejection.

Applicant respectfully notes that this reference was thoroughly discussed at the interview of January 31, 2006. Therein, the undersigned and the Inventor noted for the Examiner that Smalley fails to disclose or suggest the electromagnetic shielding enhancements of composites comprising nanotubes of the claimed invention. Smalley does not disclose or suggest that at least aspect ratio and alignment of the tubes confers

electromagnetic shielding effectiveness. Furthermore, the current amendments' recitations of an increase of at least 5 dB, at least 10 dB, at least 20 dB, at least 50 dB, at least 100 dB, or at least 150 dB in electromagnetic shielding effectiveness are also not disclosed or suggested by Smalley or any of the cited references.

Moreover, Applicant's claimed invention of enhancement of electromagnetic shielding was the result of careful experimentation and a surprising discovery, not disclosed or suggested in Smalley. No method for modifying the properties of nanotubes that would lead to enhanced shielding, or various shielding degrees, was disclosed or suggested in Smalley. Applicant therefore requests that this rejection be withdrawn at least because Smalley does not disclose or suggest Applicant's claimed invention (Amendment and Response after Non-Final, April 13, 2006, page 15).

For at least these reasons, Applicant respectfully requests that the rejection of claims 23-49, 52-54 and 76-122, under 35 U.S.C. § 102(e) or, in the alternative, under 35 U.S.C. § 103(a), be withdrawn as in error.

Remarks regarding 35 U.S.C. § 103(a)

Claims 23-49, 52-54 and 76-122 stand rejected under 35 U.S.C. § 103(a) as allegedly obvious over Smalley and Shibuta et al (US 5,908,585) ("Shibuta"). Applicant respectfully traverses this rejection.

First, as mentioned above, in the January 31, 2006 interview Examiner Yoon agreed that Smalley did not disclose or suggest Applicant's claimed invention. As no new evidence has been brought forth to support a rejection over this reference, Applicant requests a withdrawal of this rejection consistent with the Examiner's prior statements.

Second, as has already been discussed by Applicant and conceded by the Examiner, the combination of Smalley with Shibuta does not suggest enhancement of electromagnetic shielding of at least 5 dB in composites comprising nanotubes. The achievement of these enhancements is possible in various embodiments of this invention, via, for example, varying aspect ratios or different degrees of alignment of the nanotubes by shearing. The different applications of nanotubes to polymers or other substrates -- for instance, either mixing nanotubes within a material at varying depths and in varying amounts, or forming internal or external skins

of nanotubes of the material -- provide further previously undisclosed and never suggested ways of manipulating the degrees of electromagnetic shielding which nanotubes can confer. For at least the reasons outlined herein, the combination of Smalley and Shibuta does not suggest the claimed invention, and this rejection should be withdrawn.

Applicant respectfully requests that the rejection of claims 23-49, 52-54 and 76-122, under 35 U.S.C. § 103(a) be withdrawn as in error.

Conclusion

In view of the foregoing amendments and/or remarks, reconsideration of the application and issuance of a Notice of Allowance is respectfully requested.

If there are any issues remaining which the Examiner believes could be resolved through either a Supplemental Response or an Examiner's Amendment, the Examiner is respectfully requested to contact the undersigned at the number below.

Should additional fees be necessary in connection with the filing of this Responsive Amendment, or if a petition for extension of time is required for timely acceptance of same, the Commissioner is hereby authorized to charge **Deposit Account No. 14-1437 for any such fees, referencing Attorney Docket No. 8125.002.USCN**; and Applicant hereby petitions for any needed extension of time not otherwise accounted for with this submission.

Respectfully submitted,
Novak Druce & Quigg LLP

Date: February 20, 2007

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